



International

UNITED STATES, CANADA, AND JAPAN TO MAKE OCEANOGRAPHIC SURVEY OF NORTH PACIFIC IN 1955

The Government of Japan will cooperate with the United States and Canada in making a large-scale oceanographic survey of the North Pacific Ocean in 1955, according to a recent State Department dispatch. The area to be covered by Japan will be that north of 20° N. and west of 180°.

The basic purpose of the survey is a study of ocean currents but collateral studies will be made of radioactivity, migration of fish, and meteorological conditions. The Japanese expedition will be staffed with scientists from the Maritime Safety Board, Central Meteorological Observatory, Fisheries Agency, Tokyo Fisheries College, Hokkaido University, and Kagoshima University.

Four Maritime Safety Board patrol boats and two hydrographic survey boats will carry the expedition, which expects to depart in mid-July and devote two months to the survey.

WORLD SUPPLY OF FATS AND OILS IN 1955

The world will have plenty of fats and oils in 1955, although supplies will not be excessive, according to an article in the February 1955 issue of Foreign Agriculture, U. S. Department of Agriculture publication. Both edible and industrial fats and oils will be in ample supply. Moreover, demand is expected to continue steady, and prices in world markets seem likely to remain relatively stable.

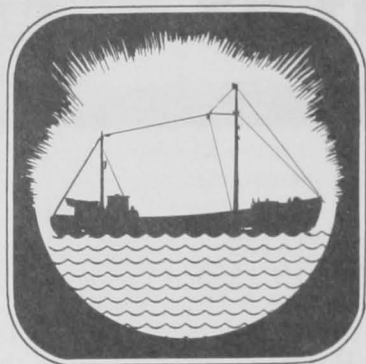
Production of animal fats--lard, tallow, greases, and butter--is expected to be as large as in 1954. And while output of the marine oils--whale, sperm, and fish--may not come up to last year's high level, production probably will be ample.

The United States, the world's leading exporter, will set a new record in the production of fats and oils in 1954-55. The major United States export items are soybeans and soybean oil, cottonseed oil, linseed oil, lard, tallow and greases, and fish oils; and the principal markets for them are Western Europe, Japan, and North and South America. With the output of fish oil expected to surpass last year's volume, United States exports of this commodity may approach the record of 1954.

Western Europe's output in 1955 of animal fats--butter, lard, and tallow and greases--probably will equal or slightly exceed that of 1954. But whether production of fish oil will come up to last year's favorable level is doubtful, although output of whale oil by the various expeditions in the Antarctic during the pelagic season that began January 7 may not differ greatly from the levels of recent years.

NORTHWEST ATLANTIC FISHERIES COMMISSION

ANNUAL MEETING IN OTTAWA, JUNE 6-11: The 1955 Annual Meeting of the International Commission for the Northwest Atlantic Fisheries will be held in Ottawa, Canada, June 6-11. It will be preceded by meetings of the groups of advisers to Panels 3, 4, and 5 on June 3-4.



The meetings will take place in the Hotel Chateau Laurier, where the participants will be accommodated and where offices for the Commission's Secretariat will be established. The opening of the first Plenary Session will take place in the House of Commons, Parliament Buildings. The Prime Minister of Canada and the Minister of Fisheries for Canada will address the opening session. Canadian government institutions, the Embassies, and Legations of the ten participating countries, as well as of other countries interested in fisheries, are being invited to attend the opening session.

ACTIVITIES FOR DECEMBER 1954-FEBRUARY 1955: The groups of advisers to Panels 3, 4, and 5 held meetings at the Atlantic Biological Station, St. Andrews, N. B., Canada, during December 7-10, 1954. Present were experts from Canada, Spain, and the United States.

The main problems considered during the meeting were some minor amendments to the haddock regulations in Subarea 5 (New England waters), the need for or the advisability of introducing a similar regulation for the trawl fishery in Subarea 4 (Nova Scotian waters and Gulf of St. Lawrence), and the possibility of extending of such a regulation to Subarea 3 (the Grand Banks of Newfoundland).

Reports were delivered on the beneficial effects of the regulations in Subarea 5 and on research work carried out in Subarea 5 to control the effects of the regulation.

Reports were also given concerning the cod and haddock in Subarea 3 and 4, these being the species mainly affected by a possible regulation. The ocean perch was also considered.

Plans for future research work to be carried out in the three subareas were discussed and elaborated.

The groups of advisers were scheduled to meet again in St. John's, Newfoundland, during the week following March 15, 1955.

A tagging poster in the English language has been issued. It advertises the fact that extensive taggings of various species of important commercial fishes (especially cod, haddock, and certain flat fish) have been carried out in the Convention Area, and that more are planned for the future. The poster explains that these taggings aim at investigating the wanderings and growth of the fish and the effects of fishing on the stocks. Finally, the poster gives instructions for the reporting of recaptured tagged fish. It is planned to issue the poster also in other languages.

An experiment in the use of motor-powered dories is being carried out on board a Canadian dory schooner fishing off Nova Scotia and on the Grand Banks. Four powered dories are being used instead of the usual 12 dories rowed by two-man crews. The powered dory is expected to treble the catch taken by present methods, not only because of the general facilitating of the work in the dory but also through making it possible to fish at depths greater than with the usual dory where lines are hauled in by hand. It is also known that experiments with motor-powered dories are planned to be carried out by the Portuguese fleet.

TRADE AGREEMENTS

NORWEGIAN-FINNISH TRADE PROTOCOL INCLUDES FISHERY PRODUCTS:

The Norwegian Foreign Office announced that a protocol to the Norwegian-Finnish Trade Agreement of March 11, 1953, was signed in Helsinki on December 17, 1954. Respecting Norway's exports to Finland, should the production of herring meal in the agreement period be the same as in 1954, the Norwegian authorities will grant export licenses for 500 metric tons of herring meal in excess of the stipulated quota (also 500 tons). Other fishery products to be shipped from Norway to Finland in the period include herring, dried fish, canned fish, alginates and products thereof, cod-liver oil, industrial fish-liver oil including seal oil, and refined seal oil (including canned oil). No fishery products will be shipped from Finland to Norway, according to a January 7 U. S. Embassy dispatch from Oslo.



Australia

1955 WHALE QUOTA CUT: The quota of humpback whales allocated to Australian whaling stations has been reduced from 2,040 whales in 1954 to 1,840 whales in 1955, reports the U. S. Embassy at Canberra. The reduction of 200 has been effected by reducing the quotas of the two largest stations in Western Australia by 100 each. The quotas for the 3 West Coast stations for 1955 are 500, 500, and 120, while the quotas for the 2 East Coast stations remain at 600 and 120 whales.

Whale stocks on the west coast of Australia are showing unmistakable signs of depletion. This has been announced by the Minister for Commerce and Agriculture who said this conclusion had been reached following close study by the Fisheries Division of the Commonwealth Scientific Industrial Research Organization and the Department of Commerce and Agriculture of biological and scientific data collected over a number of whaling seasons.

According to the survey by the CSIRO and the Department of Commerce, East Coast stocks are just about constant. They are, however, being closely watched and the quotas will be subject to annual review.

Production of whale oil by 3 of the 5 shore stations operating in Australia in 1954 amounted to some 12,000 short tons. Total production of whale oil by 4 stations in 1953 was 19,100 tons and in 1952 around 17,000 tons.

MORE PEARL-SHELL DIVERS NEEDED IN 1955: West Australian pearl-ers have asked the Federal Government to admit additional Japanese divers for the 1955 season scheduled to start in April, as crews would be needed to man seven

additional luggers operating this year. Pearl-shell shipments from Broome for the 1954 season totaled 3,311 cases, valued at £A340,000 (US\$758,000).



Barbados Island (British West Indies)

STATUS OF THE FISHERIES: Over the last 5 to 8 years, the Barbados Island's fishery has shown a development brought about through the introduction of loans to boat owners for building and refitting their boats, a November 8, 1954, U. S. consular dispatch from Barbados reports. Within the last 10 years, over 1,200 small loans have been made to some 350 boat owners. The total expenditure to October 30, 1954, was BWI\$159,000 (US\$93,000) while BWI\$102,000 (US\$60,000) has been recovered.

Increase in Vessels: To a very large extent this loan scheme has played a very important part in the development as the number of fishing vessels increased from 487 in 1948 to 603 in 1954.

Within the last three years, 18 small powered boats have been introduced to the industry. These boats have proved very satisfactory and have increased the value of catches many times over the sail-type boat. The number of boats owned by individual fishermen is estimated at 70 percent of the total number. It is also estimated that about 1,760 fishermen are engaged in the Island's deep-sea fisheries, while an additional 450 are engaged in inshore work.

Market and Beach Shelters: Three main fish markets and five beach shelters have been built. These sheds or shelters cater for fish landed at five other points along the coast.

Fish is landed at 32 points around the coast, and large quantities of fish are handled by a number of hawkers (men and women), most of whom are itinerant pedestrian hawkers. There are also hawkers who use bicycles and a smaller number of jitney hawkers. Approximately 1,200 persons are engaged in the distribution of fish in Barbados.

Landings at Three Main Markets: Statistical returns taken at the three main markets indicate that the fishing industry in 1948/49 doubled the production of 1947/48, and in 1949/50 doubled that again. There was a decrease in catches in 1950/51 and again in 1951/52; both of these years were considered poor, although the production was double that of 1947/48. In 1952/53 the catch increased again 33 percent over 1949/50, and up to the present stands as the greatest year of fishery production. The 1954/55 year is developing favorably, but does not promise to exceed the 1952/53 production.

The catch for the 1953/54 season was approximately 10.7 million pounds, with an all-time record of over 11 million pounds taken in 1952/53. The figure of 10.5 million pounds is now taken as the Island's average and represents an increase of 300 percent over 1947/48.

Of the 10.7 million pounds produced in the 1953/54 fishing year, 6.1 million pounds was flying fish. This quantity places the fishing industry at an estimated value of BWI\$2.0 million (US\$1.2 million). A break down is shown in the table.

	1,000 BWI\$	1,000 US\$	% of Total
Boat Crews' Share .	1,053	616	52
Boat Owners' " .	527	308	26
Fish Mongers' " .	43	25	2
Hawkers' Share .	410	240	20
Total	\$2,033	1,189	100

Research: The Research vessel Investigator was launched in 1949 and by 1951/52 the gill net or drift net was introduced for the capture of flying fish, and now represents approximately 60 per cent of the Island's fishery.

In 1952/53 the fisherman had accepted the gill net as an added means of capturing the flying fish

and returned the best catch ever (11 million pounds) of fish of all kinds. Further research with wire lines for the trolling of wahoo has also been developed. These lines have been weighted and have proved very successful. Research continues on flying fish and plans are ahead for the development of the bonito fishery.

As a result of these improved methods, large gluts of fish, especially flying fish, present problems for the fisherman and fish mongers at the height of the season, April-June. To meet this difficulty, plans to establish a cold-storage plant under Government auspices have been presented to the Minister for the consideration of the Government.

It is felt that with cold storage, and with a fixed minimum guaranteed price for all species, the fisherman will in turn do his best to land larger catches, knowing beforehand its value and ultimate destination. Conditions at present are only speculative.

In turn the cold-storage plant will play its great part in storing the fish for consumption during the hurricane season, August-October, when fish is in very short supply.

It is hoped that the cold-storage development will be in operation in 1956/57, if the local Government can finance the scheme in that year.

Powered Vessels: Plans have been forwarded to the Ministry suggesting ways and means for the gradual turnover from sail-type boats to small power-driven boats.

This scheme has received the favorable consideration of the Legislature, and it is planned that the first instant Government loans should be extended to assist with the building of 25 small powered boats each year for the next 5 years.

--D. W. Wiles, Fisheries Officer,
Barbados Island,
British West Indies.

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MORE FISHING BOATS TO BE MECHANIZED: Of the approximately 600 boats operating in the Barbados fishing industry, only 17 were motor driven at the beginning of 1954. However, money has been voted to help finance gradual conversion of the fishing fleet to motor power. The Government will pay part of the cost of the engines.

The pickling of flying fish in Barbados has been investigated and it is believed that production and marketing can be expanded considerably. There is still the problem of refrigeration, which at present is inadequate for preserving surplus stocks, reports the March 19 Foreign Trade, a Canadian Government publication.

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MCGILL UNIVERSITY FISHERY RESEARCH INSTITUTE: A research institute of the McGill University of Canada will be established at Sandacres, St. James, Barbados, to investigate marine life and fishery problems for the benefit of the Island. Construction of a laboratory will start shortly, reports the January 1955 issue of The Caribbean, a periodical of the Caribbean area. The institute will also conduct research on more basic scientific experimental work.



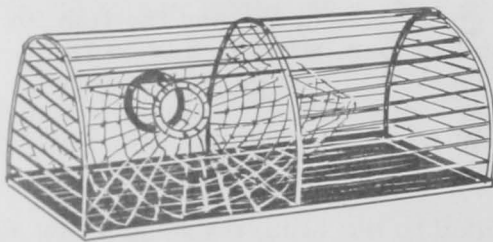
Brazil

FRENCH AND SPANISH VESSELS CONTRACT TO FISH IN BRAZILIAN WATERS: A Santa Caterina, Brazil, fishing company has been authorized to contract for four French fishing vessels to operate in Brazilian waters for a two-year period. Two Spanish vessels will also be allowed to operate during the same period, says an economic report on Brazil. The report adds that the annual Brazilian fish catch has greatly diminished since foreign participation (then Portuguese) was suspended a few years ago, states the February 11 issue of The Fishing News, a British fishery magazine.

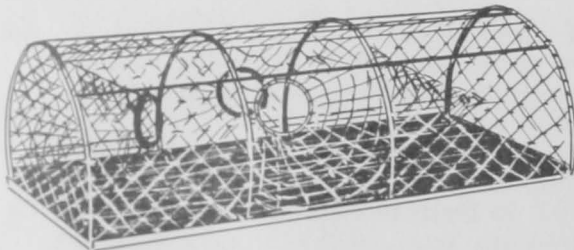


Canada

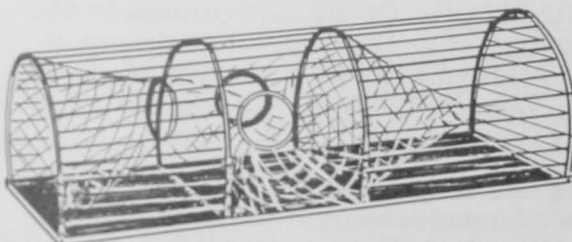
WOOD AND METAL LOBSTER TRAP EXPERIMENTS: Can the lobster distinguish between wood and metal traps? This, in effect, is what scientists of the Atlantic Biological Station of the Fisheries Research Board of Canada at St. Andrews, N. B., are trying to find out, reports the January 1955 Trade News, a Canadian Department of Fisheries publication.



A. Three-bow Miminegash trap, iron frame, steel rod cover.



B. Four-bow Port Maitland trap, iron frame, steel or aluminum wire mesh cover.



C. Four-bow Port Maitland trap, iron frame, steel rod cover.

The results of these experiments being carried out with the help of many lobster fishermen may have a far-reaching effect on the economy of the industry, because losses of wooden traps run as high as half-a-million a year in the Maritime provinces.

With the average value of these traps approximately C\$5 each, the destruction represents a staggering loss to the lobster-fishing industry. When the Fishermen's Indemnity Fund was established in 1953 under the Federal Department of Fisheries to provide low-cost insurance for fishing vessels, provision was also made to insure lobster traps against abnormal storm losses. It has also stimulated experiments by the Fisheries Research Board to find a more durable trap.

The scientists naturally turned to designing traps of metal, and in 1953

carried out a preliminary experiment; followed this up in 1954 with more extensive experiments, and are continuing this in 1955. To date the results have not provided conclusive evidence, but "are encouraging," according to the scientist in charge. He points out also that their work with the metal traps is still very much in the experimental stage.

In general the metal traps have been of conventional design, patterned after the wooden traps most popular in the experimental areas, and differing chiefly in the materials used and the methods of construction. Most of the metal traps tested have been constructed of $\frac{1}{4}$ -inch steel rod welded to $\frac{3}{8}$ -inch steel bows (or frames). In attempts to simplify construction, and thus reduce labor costs, traps iron-framed and bolted, and covered with aluminum mesh are being tried. More recent models are being strengthened with a framework base of $\frac{3}{4}$ or 1-inch angle iron.

A striking feature of the metal traps--aside from their fishing ability--has been their relative lightness in air and heaviness in water as compared to the conventional wooden traps, making even the lightest metal traps more difficult to haul. This difference in weights was demonstrated in traps tested at Port Maitland, N. S., and the results obtained are shown in table 1.

Table 1 - Comparative Weights of Wood and Metal Lobster Traps, Port Maitland, N. S.

Type	Weight	
	In Air	In Water
	<u>Lbs.</u>	<u>Lbs.</u>
Soaked wooden traps with fixed stone ballast	109	29
Metal Traps--Model 1	52	46
Metal Traps--Model 2	56	50

The number of market-size lobsters caught in the conventional wooden traps and in the two models of metal traps during the Port Maitland's experiments are shown in table 2.

During this experiment four metal traps were fished from November 2-6, 1953, and 15 metal traps were fished from December 1, 1953, to March 29, 1954. From

Table 2 - Comparative Catch of Market Lobsters by Wood and Metal Traps, Port Maitland, N. S.

Date of Tests	Trap Hauls	Catch of Market Lobsters		
		Wooden Traps	Metal Traps	
			Model 1	Model 2
Nov. 2, 1953-Jan. 14, 1954	264	351	345	-
Jan 16, 1954-Mar. 29, 1954	248	285	141	-
Mar. 24, 1954-May 28, 1954	473	326	-	234

March 24-May 28, 1954, the experiment was continued with 14 new metal traps of slightly different design.

In the first stage the metal traps caught 2

percent fewer lobsters than the wooden traps in the same number of hauls. During the second phase metal traps caught 51 percent less, making the average for the entire period 24 percent less. In the third phase, with the modified trap, the metal traps caught 28 percent fewer lobsters than the wooden traps.

However, during this test period the storm damage to the wooden traps was quite significant, while the metal traps went unharmed.

Two of the most severe storms struck in December. On December 9, 11 of the 15 wooden traps were destroyed and three others damaged. The second storm 5 days later destroyed 7 of the wooden traps and damaged two others. In order that the experiment continue on a proper basis, wooden traps destroyed or damaged were replaced as quickly as possible after the storms abated. No metal traps were destroyed, damaged, or shifted in either of the above or subsequent storms.

After completion of the Port Maitland experiment, the model 2 traps were fished at Fourchu, N. S. Since the metal traps were larger and of a somewhat different design, results were not strictly comparable (see table 3).

The metal traps caught 15 percent fewer lobsters than the wooden traps, but the individual catches were so variable as to make the difference statistically insignificant. No storms severe enough to destroy either type of trap were encountered.

The third experimental area chosen was Miminegash,

P. E. I., and 15 new metal traps comparable in size and design to the standard trap fished in this area were built for the experiment. The weights of these traps are compared in table 4.

The catch in the Miminegash area is shown in table 5.

This was the first experiment in which the metal traps fished as well as the wooden traps throughout the test period, catching 4 percent more than the wooden traps. In this experiment special precautions were taken in rigging and setting the metal traps to insure settlement to the bottom right side up. In earlier experiments there was evidence that the metal traps sometimes settled on their sides, and this undoubtedly contributed to their poorer catches.

Type	Weight	
	In Air	In Water
	Lbs.	Lbs.
Soaked wooden traps with fixed concrete ballast. . . .	58	18
Metal traps--Model 3. . . .	35	30

The experiments are continuing as the lobster open seasons rotate about the thousands of miles of Maritime coastline. Port Maitland is again a base of operations, and the traps used earlier at Miminegash are being tried near Lunenburg, N.S.

The 14 traps previously fished off Port Maitland

have been supplemented with the addition of 5 more, similar in design except that aluminum mesh on 4 and cotton mesh on 1 is being used instead of steel rods.

During the first 3 weeks of the 1954/55 season at Port Maitland the metal traps caught 146 market lobsters as compared with 148 for the wooden traps. Severe storms during the week of December 7 destroyed 14 of the 19 wooden traps and badly damaged the remainder. The metal traps came through these storms without damage.

Two problems are yet to be overcome--the cost of the metal traps and the rusting-out of the metal.

"We have to know more about the efficiency and the lasting qualities in relation to cost before we can recommend their general use. But results to date continue to be encouraging," comments the scientist in charge of the experiments.

Date of Tests	Trap Hauls	Catch of Market Lobsters	
		Wooden Traps	Metal Traps, Model 2
	No.	(Number of Lobsters)	
June 9-July 13, 1954	178	223	190

Date of Tests	Trap Hauls	Catch of Legal-Size Lobsters	
		Wooden Traps	Metal Traps, Model 3
	No.	. . (Number of Lobsters). .	
Aug. 10-Oct. 4, 1954	499	239	248



Chile

TERRITORIAL WATERS PATROL TO BE INTENSIFIED: The Chilean Fish and Wildlife Office has recommended to the Ministry of National Defense that the reconnoitering activities of the Navy and Air Force be intensified within the 200-mile zone, due to the supposition that foreign vessels, some of which have been apprehended in Peru, have been fishing near the north coast of Chile. A recent State Department dispatch pointed out that this appeared in a press report from Santiago.



Cuba

CLOSED LOBSTER AND SHRIMP FISHING SEASON: The Cuban Government announced that fishing for shrimp and lobster would be prohibited between April 23 and June 15, 1955 reports a U.S. Embassy dispatch (April 4) from Havana.



Denmark

AUTHORIZED IMPORTS OF DANISH FISHERY PRODUCTS: The following imports of Danish fishery products into West Germany have been authorized, according to the February 11 issue of The Fishing News, a British trade periodical: Canned fish valued at DM 50,000 (US\$11,900); prepared fish (where not already liberalized), DM 10,000 (US\$2,400); fresh-water fish, DM 100,000 (US\$23,800); fresh sprats, DM 500,000 (US\$119,000); and sea fish and fish waste, DM 700,000 (US\$167,000).



Greece

FISHERIES TRENDS, 1954: The total production of the Greek fishing industry in 1954 was estimated at approximately 50,000 metric tons as compared to 43,000 tons in 1953, reports the December 1954 Aleia, a Greek fishery periodical. Larger catches in 1954 of sardines and striped bonito were responsible for the increase.

Large quantities of bonito were caught in the Gulf of Pagasitico (Volo) by 120 seiners from all fishing centers of Greece, commencing in October when the fish returned from the Black Sea. From October 1-November 30 a total of 3,000 tons were caught. Wholesale prices for striped bonito in Greece ranged from 5 to 8 drachmas per kilogram (7.5 to 12.0 U. S. cents per pound). None was exported as local consumption absorbed all catches. Greek canning factories canned 85 to 90 tons of striped bonito in 1954.

The Athenian Fishery Merchants Association signed a contract with a Casablanca firm for 400 tons of frozen fish. The first load had already reached Piraeus and was being sold.

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SPONGE FISHERY 1954: Greek production of sponges during 1954 in local and foreign waters totaled 120 metric tons, reports the December 1954 Aleia, a Greek fishery periodical. Of this, 67.4 metric tons were caught off Cyrenaica, 17.0 tons in Egyptian waters, 7.0 tons off Tripolitania, and 15.6 tons in Greek waters.

In addition to the above, 13 metric tons were produced at Trikkeri and Symi. The Symi sponge-fishing fleet was financed by a Chicago, Ill., individual.

A total of 136 boats operated in the Greek sponge fishery in 1954--68 diving-suit boats, 9 fernez, 27 gagaves, and 32 harpoon boats.

Sponges from Derna and Benghazi Kapadika were sold at 960 drachmas per oke (US\$11.30 per pound) and Tsimouhes sponges at 665 drachmas per oke (US\$7.85 per pound). Tripolitania sponges--1952 stock--were sold at 845 drachmas per oke (US\$9.96 per pound), less 16 percent for all grades. A quantity of fernez sponges from Tripoli was sold at 820 drachmas per oke (US\$9.64 per pound), but the fourth and fifth grades remained unsold.



Greenland

NORWEGIAN-DANISH FISHERY STATION IN GREENLAND: In the summer of 1954 work was completed on the first stage of an expansion of facilities at the new Norwegian-Danish fishery station at Faeringehavn, West Greenland, a February 17 U. S. Embassy dispatch from Oslo states. The station is being widely expanded with Norwegian, Danish, and Faeroe Island capital to permit increased exploitation of Greenland fishing banks which have been described as "the richest in the world." The station is located in the Godthaap district of Southwest Greenland.

The new company, Nordafar, has concentrated its efforts on improving the facilities of the inner part of Faeringehavn where the company holds a 15-year concession from the Danish Government. During the short summer season of 1954 the company succeeded in constructing a new salt silo with a 6,000-metric ton capacity, and a new freezing plant with a daily capacity of 40 tons and a storage capacity of 750 tons of frozen fishery products. In addition, the deep-water quay was extended to a total of 720 feet and two large cranes were installed. The station now also includes petroleum storage tanks for supplying fuel to fishing vessels. Together with the older facilities of the company which remain in use, the station is capable of storing 6,700 tons of salt and 1,100 tons of frozen fish. The total investment at Faeringehavn is reported to amount to 7 million kroner (US\$980,000).

Future plans call for the extension of the quay to 1,300 feet and the construction of a fresh-fish processing plant, a fish-meal factory, and a fish liver-oil plant.

The purpose of the expanded installation is twofold: (1) to provision and service Norwegian, Danish, Faeroe Island, and other foreign expeditions which fish in West Greenland waters, and (2) to process fish caught in West Greenland waters for direct sale to various foreign markets.

The Faeringehavn station is open from April to November. West Greenland bank fisheries consist chiefly of cod and normally take place between May and September. In general, trawling is confined to the months of June and July. In 1954 the Faeringehavn station was visited by at least 140 fishing vessels including a number of British, Spanish, Portuguese, and Icelandic vessels as well as about 70 vessels from Norway and 40 from the Faeroe Islands.

As a result of the improved facilities offered by the Faeringehavn station, more Norwegian fishing expeditions than ever before operated in West Greenland waters in 1954. According to official reports of the Norwegian Directorate of Fisheries, 76 vessels from Norway (67 line vessels and 9 trawlers) were active off West Greenland, compared with 54 in the previous season. These vessels produced in 1954 approximately 16,000 metric tons of salted cod, compared with about 8,000 tons in 1952

and 10,000 in 1953. Four vessels fished halibut exclusively in 1954 and caught approximately 500 tons. All of this fish plus the total production of frozen fish products by Nordafar in 1954 was shipped to Norway for further distribution; the salted cod is dried and marketed as klippfish. At least 80 Norwegian vessels are expected to participate in the Greenland fisheries in 1955 and the production of salted cod may exceed 20,000 tons.

Beginning in 1955 Nordafar intends to market frozen fish directly in various foreign markets. Current plans call for marketing the more expensive frozen cod and halibut chiefly in the United States, and the less expensive ocean perch (redfish) and ocean catfish (wolffish) in East Germany; efforts will also be made to market frozen fish in Greece and Latin America. Direct foreign sales will permit Nordafar to make its operation more efficient in that the same ships which deliver salt, frozen bait herring, and other supplies to Faeringehavn can carry away the company's frozen fish products.

As the price paid for fresh fish landed at Faeringehavn is considerably less than the landed price in northern European fishing ports, e.g. 30 ore per kilogram (1.9 U. S. cents per pound) for fresh cod landed at Faeringehavn in 1954 as compared with an average landed price of 75 ore (4.8 U. S. cents per pound) for Norwegian Lofoten cod the same year, Nordafar is able to offer serious competition to exporters of frozen fish in Norway and other countries. Norwegian exporters already have begun to voice apprehension of this development.



India

MADRAS OYSTER PEARL FISHING REACTIVATED AFTER 28 YEARS: The Madras Government plans to start pearl fishing operations off Tuticorin from March 15 to April 30, 1955. The last pearl fishing in this area was in 1927, points out a March 4 U.S. consular dispatch from Madras, when 30 million oysters were collected for a net revenue of over Rs. 100,000 to the Madras Government.

The Madras State Fisheries Department has since 1927 been conducting periodical surveys of the area. In June 1952 it was reported that a large shoal of "spat" (unmatured pearl oysters), located 10 miles off the Tuticorin coast three years previously, had been found spread over a wide range from Tuticorin to Rameswaram. In order not to disturb the growth of the oysters the Department cautioned all ships and power boats in the area and restricted fishing. Subsequent investigations by the Fisheries Department in March-April and January-February 1955 are reported to have shown the presence of about 27 million oysters ripe for taking.

The prospect for successful pearl fishing off Tuticorin in March-April 1955 were considered good. The Madras Government planned to conduct the operation from the middle of March to the end of April, utilizing a fleet of 400-500 country boats with about 2,000 divers drawn from different parts of the country. The Madras Director of Fisheries and the Deputy Director of Fisheries (Marine) will be in charge during the 45-day operation.



Israel

FISHERIES TRENDS 1953/54: Israelis consume an average of 22,000 metric tons of fish a year, of which about two-thirds is imported, reports the April 2 Foreign Trade, a Canadian Government publication. The bulk of the imports are frozen and salted fish and fillets obtained from Northeast Europe under bilateral exchange

clearing agreements. Local production from pond, lake, and sea increased by 16-percent to 8,605 tons during the year ending September 1954 as a result of new equipment, better techniques, and research. A further expansion in sea fishing--surface, net, and deep-sea--is envisaged in the near future, following the acquisition during 1954 of a number of trawlers from the United Kingdom and West Germany. Eighteen more ships have recently been ordered from Germany, all to be financed from Jewish war reparation funds made available to Israel by West Germany.

Although a large fish importer, Israel is conscious of export possibilities and recently shipped a first consignment of 2,000 tons of stuffed carp to the United States. Plans are under way to expand this trade. Carp is the main pond species in Israel and production is expected to reach 6,000 tons in 1955, compared with last year's total catch of 4,300 tons.



Jamaica

SHRIMP TO BE FLOWN TO UNITED STATES: Possibilities of supplying 10,000 pounds of shrimp monthly by air to a big food concern in New York are now being explored in Jamaica, reports The Caribbean (January 1955), a periodical of the Caribbean area.

A representative of the United States concern in Jamaica had talks with the Ministry of Agriculture, the Industrial Development Corporation, and private interests in this connection. He said: "I am of the opinion that shrimps are here in abundance, only waiting to be reaped." He added, "I see no reason why something could not be worked out for the mutual benefit of the local industry and the importers in New York."

Under the scheme, the shrimp would be flown by plane to Miami in specially-designed containers, to be distributed fresh as well as canned through outlets in the United States.



Japan

LAW FOR PROMOTION OF MARINE PRODUCTS EXPORTS: A Japanese law for the promotion of exports of marine products (Law No. 154 of June 2, 1954) became effective December 1, 1954. This is a summary of the law from a digest in The Japan Trade News, January 1955, as reported in a February 24 U. S. Embassy dispatch from Tokyo:

Definition of Marine Products: (1) Canned tuna and bonito, in oil or brine; (2) frozen tuna, bonito, and swordfish; (3) canned sardines, in oil, tomato sauce, or condiments; (4) canned mackerel, in oil, tomato sauce, or condiments; (5) fish-liver oil; (6) canned crab; (7) canned salmon; (8) agar-agar.

Registration, Inspection, and Control: Enterprises manufacturing marine products for export shall apply to the Ministry of Agriculture and Fisheries, or the Prefectural Governor, who shall inspect the manufacturer's equipment and, if it conforms to stipulated conditions, shall register the enterprise.

Export Associations: Registered manufacturers may create a national exporters association on a nonprofit basis with each member having an equal vote, regardless of size. The association may engage in the following activities on behalf of its

membership: (1) loaning funds; (2) receiving, warehousing, inspecting, and shipping of marine products; (3) purchase of materials; (4) research, education, and investigation in respect of marine products.

Marketing Controls: The association, whenever there arises undue competition among its members resulting from overproduction or restrictions at destination, may exercise controls over quantity, quality, delivery, selling method, time of delivery, and selling price for the purpose of stabilizing the industry and providing for the export of marine products in an orderly fashion.

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FISHERY TRAINING VESSELS REPORT TUNA ABUNDANT IN INDIAN OCEAN:

The master of the Japanese fishery training vessel Shunkotsu Maru reported that the Indian Ocean to the northeast of Madagascar abounds in yellowfin tuna and offers excellent opportunities for Japanese fishermen provided a base nearer than Japan could be used. The Shunkotsu Maru of the Fisheries Agency Training Institute at Shimoneseki, and the Osho Maru of the Hokkaido University fisheries department recently returned from training cruises in the Indian Ocean which included exploratory searches for new fishing grounds. The Shunkotsu Maru carried 44 fisheries students and, for part of its trip, had on board four officials of the Ceylonese Government.

This report, and the presence of Ceylonese Government officials, would seem to be part of the effort to arrange for a joint Ceylonese-Japanese fishing corporation, which has been widely discussed and seems to have good promise, a March 2 U. S. Embassy dispatch from Tokyo states.

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MORE SALMON AND CRAB FACTORYSHIPS: Japanese fishery firms in 1955 will build two new salmon canning factoryships and convert nine former cargo vessels to canning factoryships for salmon and crab production, reports a March 10 U. S. Embassy dispatch from Tokyo. (See tables.)

Table 1 - Cargo Vessels Being Converted to Salmon Factoryships

Name	Gross Tons	Date Built	No. of Canning Lines
<u>Terutama Maru</u> . .	8,631	1925	2
<u>Eiko Maru</u>	9,325	1930	3
<u>Kizan Maru</u>	12,336	1925	3
<u>Nichian Maru</u> . . .	8,451	1919	1
<u>Kyokko Maru</u> . . .	10,322	1921	2
<u>Choko Maru</u>	9,177	1932	2
<u>Baikal Maru</u> ^{1/} . . .	4,804	1922	1
<u>Hakuyo Maru</u> . . .	6,098	1921	1

^{1/}Former whaling mothership.

In addition to the above, the Tsuruoka Maru, a tanker of 15,826 deadweight tons, is being converted into a whaling factoryship. The Kaiyo Maru, of 8,920 deadweight tons, was purchased for conversion into a crab-canning ship but the conversion will not be undertaken in time for the 1955 season.

All these conversions involve old slow vessels of small economic value in ocean trading. As cannery ships this lack

Table 2 - New Salmon Cannery Factoryships Being Built

Name	Gross Tons	Date Built	No. of Canning Lines
<u>Koyo Maru</u>	7,400	1955	2
<u>Itsukushima Maru</u> . .	5,700	1955	2

Table 3 - Cargo Vessel Being Converted to Crab Factoryship

Name	Gross Tons	Date Built	No. of Canning Lines
<u>Yoko Maru</u>	8,380	1921	2

of speed is immaterial. The conversions therefore will build up a most substantial fish-processing fleet and at the same time will relieve the original owners of a number of antiquated ships of little value.

These conversions are also regarded as evidence that the salmon and crab fisheries production will improve, possibly because of easing of the U. S. S. R. attitude regarding Japanese fishermen in Okhotsk and Kamchatkan waters, a January 21 U. S. Embassy dispatch from Tokyo points out.

* * * * *

SALMON PRODUCTION TO ALMOST DOUBLE IN 1955: Due to a marked increase in the number of salmon fleets, the Japanese 1955 salmon production is estimated at 38.0 million fish, almost double the 1954 production of 20.5 million fish (see table). This preliminary estimate was made by the leading fishing companies but not as yet verified by the Japanese Fisheries Agency, a March 10 U. S. Embassy dispatch from Tokyo reports.

Species	1955 Estimate	1954 Catch
Salmon:	(Millions of Fish)	
Sockeye	7.3	3.8
Chum	14.6	9.4
Pink	14.2	5.8
Silver	1.9	1.5
Totals	38.0	20.5

Total production of canned salmon from the 1955 catch is estimated at 1.2 million cases (96 8-oz. cans), of which 1.0 million cases will be produced on board ship and 0.2 million cases on shore. It is expected that the floating facilities for canning will be 4 or 5 times those available in 1954.

Exports in 1955 are expected to be between 700,000 and 800,000 cases at the following f.o.b. prices: sockeye US\$30, pink US\$18.50, silver US\$24 per case. Presumably the bulk of these exports will go to the sterling area as in 1954.

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EARLIER TRAWLING FOR SOLE IN NORTH PACIFIC TRIED: The 933-ton Japanese trawler Asama Maru was expected to sail shortly to engage in trawling for sole in Bristol Bay and the North Pacific, a March 16 U. S. Embassy dispatch from Tokyo reports. This will be a repetition of the Asama Maru's experimental work in 1954, and is intended to determine if this fishing may profitably be commenced earlier than May. It is also intended to give further comparative figures as to the relative economy of independent trawling as compared to the mothership expeditions also conducted in 1954.

JAPANESE GOVERNMENT



Republic of Korea

UNKRA COMPLETES TEN DEEP-SEA TRAWLERS: Two modern deep-sea fishing trawlers owned by the United Nations Korean Reconstruction Agency (UNKRA) sailed from Hong Kong early in March, flying for the first time in marine history the blue-and-white flag of the United Nations, according to a March 9 press release from that Agency. An official of the Agency, which built the boats to speed the recovery of the Korean fishing industry, said eight other vessels were scheduled to leave after the first two arrived at the Korean port of Pusan.

Upon arrival in Pusan, the boats were to be registered under the South Korean flag and join the Republic's fishing fleet.

The ten 77-ton trawlers were built for UNKRA by a shipyard at Kowloon, Hong Kong, at a total cost of about US\$500,000. The Agency spokesman said the shipyard delivered them on March 1, at which time the flags were hoisted.

The vessels have an over-all length of 75 feet 7 inches, and are equipped with British-manufactured 160-hp. marine Diesel engines capable of speeds up to nine knots. They will enable fishermen to extend their operations to rich fishing areas up to 1,000 miles offshore. Korean Government and fisheries officials joined with UNKRA fisheries experts in the design and specifications of the boats.

The construction of the trawlers is part of UNKRA's over-all program aimed at restoring the Republic's fishing fleet and industry.

The end of the fighting found Korea, formerly one of the six foremost fishing countries of the world, almost stripped of boats, gear, and fish-packing equipment. Of the 43,834 boats that survived, only 3,295 were powered craft; the remainder were either sail or hand operated. Few were seaworthy enough to venture beyond the little bays and inlets of Korea's coastline. The big fish in offshore waters could not be caught.

The nation depends upon marine products for 80 percent of its protein diet, and fish production dropped from 600,000 metric tons in 1940 to 270,000 tons in 1954. Nearly 600,000 fishermen and persons directly employed in the industry were practically destitute, and some 250,000 engaged in subsidiary industries were unemployed.

To meet this urgent need, UNKRA started a program of aid that has helped every branch of the industry. Nets and equipment were bought to enable fishermen to go to sea. Canneries and ice plants were repaired. Small business concerns were subsidized and fish markets rehabilitated.

Korean shipyards in operation are also bringing new life to the ports. Under an UNKRA program of loans to fishermen, 13 smaller boats are either completed or in process of construction, and a further 6 are to be started at an early date. UNKRA has already advanced more than 23 million hwan (about US\$130,000) to accelerate this program. The money has enabled fishermen to buy imported timber and engines. Repayment is spread over a period of three years.

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INSHORE FISHING VESSELS BUILT WITH UNKRA AID: Five new Korean fishing vessels, built under a loan fund established by the UNKRA, were launched on January 28 in Pusan, a report from UNKRA Headquarters announced February 1. The boats, along with one completed last November in Kunsan, are the forerunners of a fleet of fishing vessels being built in shipyards all along Korea's coastline.

The 13-ton long liners are suitable for inshore fishing, and mark an important stage in the reestablishment of the Republic of Korea's war-ruined fishing industry. Boats, nets, fishing gear, and other necessary equipment were lost or damaged in the fighting, and the industry, traditionally a source of food second only to rice production, was reduced to a fraction of its capacity.



Mexico

EXPORT DUTIES ON SHRIMP AND FILLETS--CORRECTION: The Mexican export tax on frozen shrimp at 30 centavos per 100 kilos plus 5 percent of the value was incorrectly converted to U. S. currency on page 69 of the March 1955 Commercial Fisheries Review. The correct conversion is almost 1 U. S. cent per hundred-weight, not 1.1 U. S. cent per pound.



Norway

LOFOTEN COD CATCH IMPROVES: The annual cod fisheries on the Lofoten banks in North Norway got off to a bad start but were improving after five weeks, reports a March 10 bulletin from the Norwegian Information Service. At the half-way mark the total landings were 5 percent larger than for the same period in 1954, with only a third as many fishermen participating.

The reason why so many fishermen are not taking a chance on the Lofoten banks this year is fairly obvious. Two bad seasons, coupled with predictions that this year's prospects weren't too good either have persuaded the fishermen that they might as well stay home.

So far, jiggers and hand liners have made out quite well, while netters have lagged behind in their catches. On March 14 the superefficient purse seiners were to get the official green light to join the competition. If they are lucky, it would have an important bearing on the final result of Norway's northern cod fisheries.



Pakistan

RESEARCH VESSEL DONATED BY FOA: The Machhera, a 67-foot scientific boat destined to play a pioneer role in developing Karachi as one of the great fishing ports of Asia, was presented by the U. S. Ambassador to Pakistan to the Pakistan Agriculture Minister recently, reports a March 11 bulletin from the Pakistan Embassy in Washington, D. C.

The craft is designed to search out and chart the seasonal courses and depths of the great shoals of fish believed to teem in the Arabian Sea. It is hoped and expected that the new sources of fish discovered will mean better food at lower prices and that large-scale exports will earn hard-currency foreign exchange.

The vessel was purchased for US\$108,000 by the U. S. Foreign Operations Administration. It will be operated by the Central Fisheries Department of the Ministry of Food and Agriculture.

The research findings of the boat will help to develop the fishing industry of Karachi in selecting the most efficient type of fishing vessel. The distance from shore and the depth in water that the shoals are found will indicate the ideal boat's shape, size, horsepower, and type of fishing gear.

The Machhera is 19 feet wide and has a 60-ton gross weight. The equipment includes 150-hp. main engine, a two-way radiotelephone system, berths for a crew of 10, and a modern galley.



Panama

SHRIMP FISHERY EXPANDING: The shrimp fishery based at Panama City has become increasingly important during the past few years, reports the February 19 Foreign Trade, a Canadian Government publication. This shellfish now constitutes the country's second export, exceeded in value only by bananas. From only US\$154,000 in 1950, shrimp shipments have risen to an estimated US\$4.1 million for 1954.

The shrimp fishery is under the control of a Panamanian Government-sponsored cooperative which now owns a cold storage and packing plant, a small shipyard, and

a fleet of 80 shrimp trawlers. After cleaning and quick-freezing, the shrimp are shipped to United States markets.

Canadian firms exported to Panama fishing nets and lines, which totaled less than C\$600 for the three years 1949 to 1951, and reached C\$27,132 in the first 10 months of 1954.



Republic of the Philippines

UNITED STATES ENTERPRISE EXEMPTED FROM FISHING BOAT EXCHANGE TAX: The Philippine Secretary of Justice issued an opinion on February 23, 1955, which states that United States citizens and business enterprises may be granted exemption from the 17-percent tax on foreign exchange they bring in to buy fishing vessels for operation in Philippine territorial waters.

The opinion came in reply to an inquiry from the acting deputy governor of the Central Bank regarding the purchase of two deep-sea fishing vessels by a firm with "100 percent Filipino and American capital." The opinion employed the theory that a tax on United States citizens and business enterprises operating public utilities and exploiting Philippine natural resources would necessarily place them "in disparity, not parity" with tax-exempt Filipinos engaged in similar trades. The opinion of the justice secretary was an interpretation of Republic Act No. 1175 in relation to the so-called parity amendment to the Constitution.

The Secretary went on to explain that although the law does not specifically include the exemption of United States citizens from the payment of foreign exchange tax in the purchase of vessels intended for Philippine registry, he was assuming this exemption since the statute is connected to the parity amendment by reason of the presumption that when Congress enacts a statute it acts within the scope of its powers.

The Secretary further clarified the matter by stating that fishing vessels operating in Philippine waters are engaged in the exploiting of the natural resources of the country since fish are a part of those natural resources. He reasoned further that since United States citizens are given the right to exploit the natural resources of the Philippines the tax exemption might be extended to them.

The Secretary qualified his opinion by saying that if the exemption were granted that the fishing vessels would have to be used in Philippine waters.

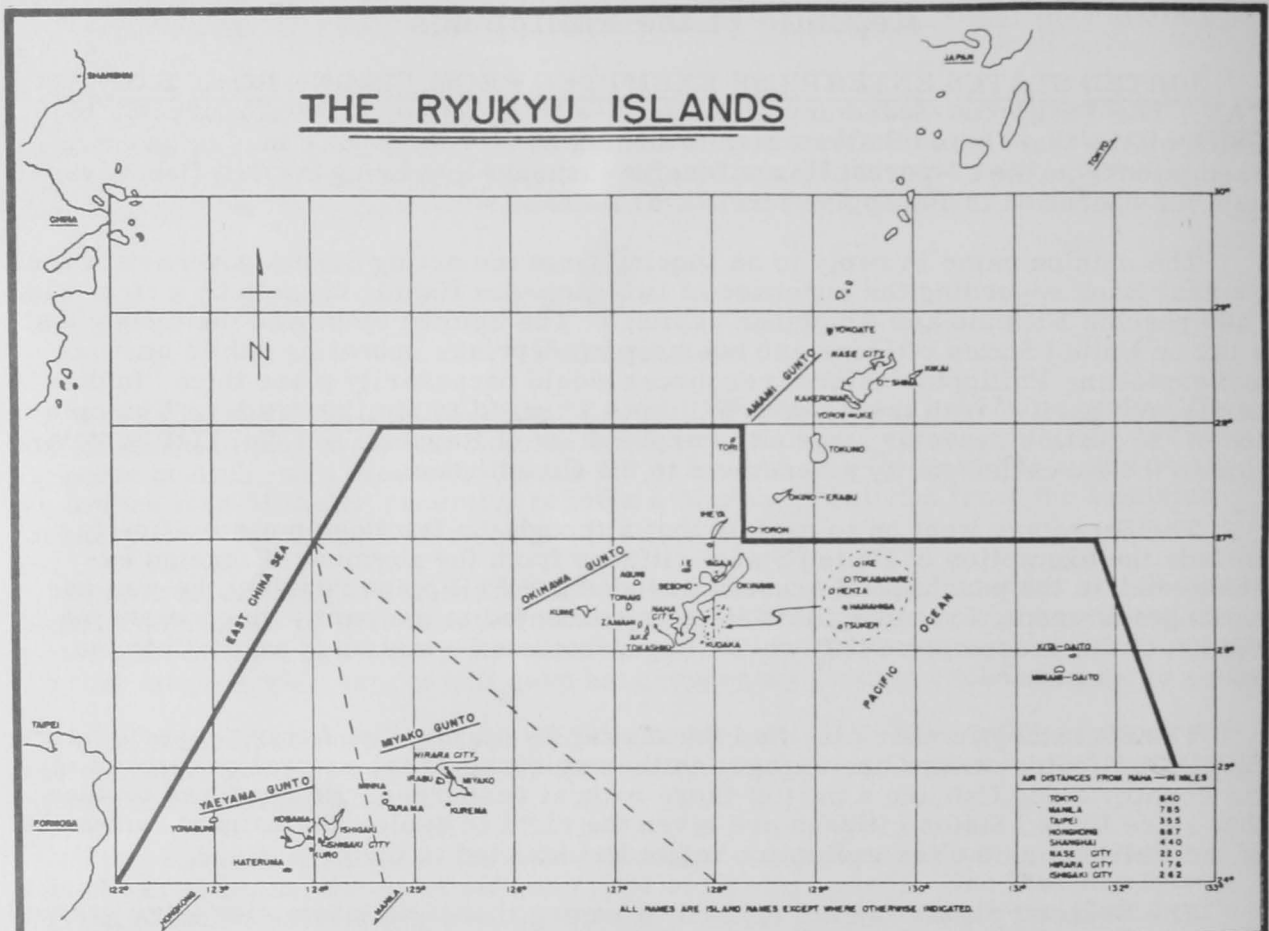
United States citizens and enterprises who fish or intend to fish partly within and partly outside Philippine waters would be denied exemption from the tax because of the difficulties of apportioning the price of the vessel to serve the rule of strict construction of tax exemption statutes.



Ryukyu Islands

FISHERIES TRENDS, JANUARY-JUNE 1954: Thousands of canoes and small boats exploit the inshore fisheries in most areas of the Ryukyus to the saturation point, according to Civil Affairs Activities in the Ryukyu Islands for the period ending 30 June 1954, published by the U. S. Civil Administration of the Ryukyu Islands. Offshore operations require financial backing beyond the capacity of local individual boat owners. For this reason formation of the Ryukyu Fisheries Company by the

entire fisheries industry was encouraged. It is the first commercial-fishing company ever to operate in these islands. When the company commenced operation of the reefer plant, it chartered the two 150-gross-ton refrigerated fishing vessels which were built with GARIOA funds, and engaged an expert fisherman from Japan to teach local crews how to utilize these craft in the offshore fisheries. In less than a year and a half of operation, catches for voyages averaging 37-40 days have risen from 30,000 pounds to more than 100,000 pounds per trip. The latest produced 134,000 pounds, chiefly tuna and spearfish. This compares favorably with the catch of Japanese vessels of the same size similarly engaged.



The Ryukyu Fisheries Company, Ltd., a joint-stock company owned principally by the fishing industry through its federations and cooperatives, operates the Naha Reefer Plant under lease, as well as three fishing vessels. When this large cold-storage plant commenced operations on February 8, 1953, under Ryukyuan management, it inaugurated a new era in the storage and handling of perishable food products in the local economy. After more than a year of missionary work, local merchants are beginning to use the chilled and cold-storage facilities. However, the bulk of the fish stored is still caught by the company-operated boats. Only when there is a glut on the fresh-fish market do fishermen store fish in the reefer plant until prices rise. Amounts in excess of subsistence needs are ordinarily processed in the fishing villages. This is chiefly skipjack tuna which is manufactured into "fish sticks" for local use and export to Japan.

Cold-storage facilities encourage maximum use of the fishing fleet. When catches are heavy, vessels can now remain at sea and come in with full loads. Before the reefer plant was in operation, vessels often ceased good fishing in order to make port with partial loads hoping to beat heavy landings and the inevitable drop in price.

The Ryukyu Fisheries Company purchased a 4-year-old, 55-ton fishing vessel built with GARIOA funds in March 1954. The original purchaser employed the craft as a common carrier, having neither the knowledge nor financial resources to equip the vessel and enter a fishery unknown to local fishermen, and it was too large to operate profitably inshore. The company rigged this vessel also for offshore long lining, and the new crew had a nucleus of members from the 150-tonners. Working in the waters north of Yaeyama, this vessel made two successful trips, bringing in some 20,000 pounds of tuna and spearfish on each voyage which averaged two weeks in duration. It was believed that development of the local fishing industry depends primarily upon further expansion into the rich offshore waters in the East China Sea, hitherto monopolized by Japanese vessels and crews. Ice and refrigerated storage plus larger vessels have opened these rich areas for the first time to Ryukyuan fishermen. Their first operating organization, the Ryukyu Fisheries Company, must be strengthened and their leaders indoctrinated into commercial-fishing techniques and business methods. When needed, other fishing companies should be formed through the cooperatives and federations of fisheries cooperatives. Since the Ryukyu Fisheries Company began operating the reefer plant and large vessels in offshore fisheries, the retail price of fish in Naha and environs has been cut in half.

Lack of abundant low-priced fish for local consumption has always been a paramount problem in Ryukyuan fisheries and the economy of the islands. The greatest fish tonnage has always come from the high-priced fishes--tuna and spearfish. Prior to World War II most of the tuna was exported to Japan in the form of processed "fish sticks." In return low-priced dried and salted fish, such as mackerel and sardines, were imported from the home islands to feed Ryukyuan. Miscellaneous reef and bottom fishes are relatively high in price. They cannot be taken in quantities to satisfy the local demand for low-priced fish.

Deep water surrounds all the islands of the Ryukyus; the sea about each island within soundings is quite circumscribed. Overfishing many of these limited grounds since the war has resulted in lower catches per boat with the corollary that the fish taken command a higher price. This has brought about a local anomaly whereby tuna often sells for less on the fresh-fish market than inferior fish because of the chronic short supply of the latter and the steadily increasing tuna landings.

Subsequent to World War II Japanese vessels fishing in the vicinity of the Senkaku Group in the southern Ryukyus discovered the presence of mackerel in subsurface schools, and their long-line vessels in that area began fishing them for tuna bait. With the establishment of the Rhee Line and the loss to Japan of valuable mackerel fishing grounds adjacent to Korea, Japanese began to fish for mackerel commercially in Ryukyuan waters. Mackerel fishing is unknown to local fishermen and none were landed in these islands until May 1954 when a Japanese 39-gross-ton vessel, engaged in a joint operation with the Miyako Federation of Fisheries Cooperatives, landed 16.5 metric tons at the Naha Reefer Plant. With 12 inexperienced Miyako fishermen in the crew of 42, this vessel has averaged about 11 tons per week. The Ryukyuan have become interested and a 30-ton boat from Itooman was rigged with the assistance of the Japanese specialists and manned with a local crew. It sailed in company with the Japanese craft and fished with them the schools located below the surface by their sonar equipment and then chummed to the top. Since its initial venture, this Ryukyuan boat has paid expenses.

This modest venture in mackerel fishing was suspended during July and August, the worst typhoon months, to be resumed in September. Several more local boats are being prepared to enter this fishery, and two additional Japanese mackerel boats and partial crews will assist these vessels by engaging in joint operations for a limited period under contract.

Of Japan's fish catch of 3 million metric tons per year, more than 2 million tons consist of mackerel and sardines. These constitute the low-priced fish food

of the masses in Japan as well as in nearly all great fishing countries. Mackerel and sardines have never been caught in significant amounts in the Ryukyus.

It is considered that the development of a mackerel fishery by Ryukyuan fishermen in Ryukyuan waters will have significant and far-reaching effects upon the local economy as well as upon the local fishing industry. Operation of the Naha Reefer Plant by the fishing industry makes this new fishery possible. A supply of frozen bait is now always available, and returning vessels can always sell their entire catch for storage, or store it themselves. Boatloads of mackerel can be quickly boxed, quick-frozen, glazed, and stored both for food during the winter months when landings are small, as well as for use as bait. Bait has heretofore been scarce and expensive over the winter, and the largest source of supply for Okinawa came from Amami Oshima which has reverted to Japan.

Small refrigerated storage plants are to be built on Ishigaki and Yonaguni. The Yaeyama Federation of Fisheries Co-Operatives and Ryukyu Fisheries Company have ordered equipment to construct jointly a \$25,000 five-ton ice and cold-storage plant on Yonaguni which will be operated by the Ryukyu Fisheries Company. The Yaeyama Federation will finance and operate the contemplated 75-ton reefer on Ishigaki.

Six licenses have been issued for the culture of pearls and pearl blisters in the indigenous black-lipped oyster (*Pinctada margaritifera*). Four companies, all joint Ryukyuan-Japanese enterprises, are presently in operation and two are in production. Locations are: two each in Okinawa, Miyako, and Yaeyama. The Japanese technicians are training local personnel in the techniques and science of pearl culture. During the past three years, the largest operation, conducted by the International Pearl Company of Miyako, has planted 57,000 pearl oysters. They planned to harvest 10,000 spherical pearls in the fall of 1954.

During the first four months of 1954 a total of 253 short tons of button shells with a value of US\$208,000 was exported to Japan. In addition, about 1.4 tons of locally-cut button blanks valued at US\$2,500 were shipped. Seaweed, shark fins, and other marine products exported during the first half of 1954 amounted to US\$64,000.

Articles from Japanese sources reprinted in local newspapers after the Marshall Islands thermonuclear bomb tests upset the Ryukyuan fish-consuming public with reports of radioactive fish condemned in Japan as dangerous to human health, therefore tests were made on all fish caught more than a hundred miles offshore. When Japanese newspapers reported fish caught in Ryukyuan waters being condemned in Japan as radioactive, fish buying throughout the Ryukyus stopped entirely or was drastically curtailed. A system of inspection of all fish landed at the largest auction market, plus testing and reporting on samples submitted, together with a newspaper and radio education and information program, restored public confidence in time. However, the entire fishing industry suffered for several weeks from light sales at low prices.

On May 27, 1954, 29 specimens of *Tilapia mossambica*, an African importation into Southeast Asia, were brought to Okinawa by air. This fish has become quite popular with fish culturists from Indonesia to Formosa during the past several years. It is a prolific breeder and fast grower in ponds and rice paddies, hardy, a promiscuous feeder, and in addition to its value as an additional source of protein food, it has been used effectively for mosquito control. *Tilapia* spawned on Okinawa; and within two months after receipt, 5,500 fry and fingerlings had been distributed to farmers and placed in community ponds. This is the farthest north these fish have been introduced, but it is believed that the subtropical climate in these islands will be favorable to their successful propagation.



U. S. S. R.

SEALING EXPEDITION IN ARCTIC ALARMS NORWEGIAN SEALERS: Norwegian sealers who arrived on March 20 at the Western Icefields (north of Iceland and east of Greenland) were shocked to discover a Russian sealing expedition already on location there. The expedition is reported to consist of at least six catching vessels accompanied by an icebreaker functioning as a mothership. This unexpected development has alarmed Norwegian sealers who for many years have operated virtually without competition in the Western and Greenland ice fields. By Norwegian Government regulation the Norwegian sealers were forbidden to commence seal hunting before March 23 this year, but at last reports they were prepared to "jump the gun" to meet competition from the Russians.



United Kingdom

FROZEN FISH EXPORT MARKET BOOMING: The British export market for quick-frozen fish is so healthy that a big percentage of production of some firms is going overseas, according to the January 14, 1955, issue of The Fishing News, a British fishery magazine.

At one period after the war, Australia was the biggest market for quick-frozen consumer packs. Since then other markets have been explored and Grimsby quick-frozen fish, in bulk as well as in consumer packs, has gone to many countries, including Hungary and Rumania. But the Iron Curtain markets are handicapped by the trading system which prefers barter in goods to cash transactions.

One Grimsby firm exported more than half of its quick-frozen output in 1954. The publicity man for this firm said "The value of those exports was well into six figures. Our shipments are extremely varied and our list contains 100 items. It is a matter of interest that we were the first firm to export Dover soles to the United States in consumer packs.

"In the past year we have doubled our plate-freezing capacity at Grimsby, and our Aberdeen factory has been turned over completely to quick freezing, mostly for overseas. We have an office in Australia and we send our products to most of the Commonwealth countries.

"At the moment we are not able to fulfill all the demands made upon us."

Another plant in 1950 exported only 10 percent of its output but in 1954 half its production went overseas, some for British and United States troops. The firm also sent the first consignment of British fish to Canada during 1954.

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EXPERIMENTAL CRUISES FOR HAKE PLANNED: Two experimental fishing cruises early in 1955 to carry out research into the hake fisheries on the Northern grounds are planned by a Fleetwood trawler chartered by the White Fish Authority. This was revealed in a New Year's message issued by the president of the Fleetwood Fishing Vessel Owners' Association.

During the past few years, the president said, there has been a marked decline in the yield of hake from the West Coast grounds and the ever-popular demand for this fish makes the success of the venture a matter of high importance to Fleetwood.

Many years ago similar voyages were undertaken from Fleetwood through the local owners' association in cooperation with the British Government Departments concerned and the results were highly satisfactory, reports the December 31, 1954, issue of The Fishing News, a British trade paper.

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HULL FISH WORKERS GET HIGHER WAGES: Higher minimum rates of pay were granted 2,500 fishery shore workers in Hull, England, as the result of negotiations completed early in January, reports The Fishing News (January 14), a British fishery magazine. The agreement was reached by negotiations between employees' unions and the dealers association. The new and old Hull minimum weekly rates of pay are as follows:

Type of Worker	New Rates		Old Rates	
	£	US\$	£	US\$
Adult men workers in curing houses	132s.6d.	18.55	125s.	17.50
Filleters, night smokers, and motor drivers	142s.6d.	19.95	135s.	18.90
Assistant night smokers	132s.6d.	18.55	125s.	17.50
Adult women	90s.	12.60	85s.	11.90
Market men	137s.6d.	19.25	130s.	18.20

Pro-rata increases are also included for juveniles.

These new rates for the Hull market are reported to be 7s.6d. (US\$1.05) per week higher than the revised rates paid at Grimsby.



Venezuela

TUNA FISHING FIRM BEGINS OPERATIONS: A new Venezuelan fishing company, employing Japanese fishing experts, has begun fishing for tuna off the Venezuelan island of Orchilla. Four small boats are involved in this preliminary operation, all under the command of Japanese, a U. S. Embassy dispatch from Caracas (March 7) reports.



NORWEGIANS USE RUBBER WORMS AS BAIT

Norwegian fishermen claim to have "kidded" fish to take rubber worms. They use nylon line to which is attached a heavy tin bait. Along the line, at intervals of about 9 feet, they fasten 30 to 40 rubber worms as bait, says the Norwegian Fishing News.

The line with the rubber worms and the heavy tin bait is lowered into the water to about 60 fathoms and then, at once, hauled in again. "As soon as a fish had taken a particular bait, the other rubber baits were automatically put in tempting motion by the kicks and wriggles. And this process accumulated a 'more the merrier' fashion as further fish took the baits."

Sometimes the fishermen took haddock on the lower baits, cod on the middle ones, and pollock on the upper. It is claimed that 25,000 tons of cod were caught last year fishing by this method in Norway.